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AUTHOR Rhodes, Lynn K.
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ABSTRACT

Reading can be defined as a meaningful interaction with a print setting. Interactive models of reading assume that lower level and higher level processing occurs simultaneously, interacting with each other. The familiarity of the book, the context in which a sign occurs, and the illustrations of a book are all examples of print setting cues that some young children use in order to interact with a print setting. In a case study of a young girl's written language development between the ages of two and five, two questions were addressed: (1) How had the child been learning about written language? and (2) What had the child been learning about written language prior to formal instruction? In response to the first question, it was observed that the child determined the content, timing, and structure for her written language. In response to the second question, it was obvious that the child expected written language to be meaningful and personally relevant. She also learned that written language differed from oral langauge, and until the age of five, she paid little attention to the print in print settings. From the observations it was clear that the ability to label letters was not a necessary prerequisite to learning to discriminate between words or to recognize or produce words. (HOD)

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Visible Language Learning: A Case Study

Lynn K. Rhodes
University of Colorado at Denver

Not long ago, my daughter Kara and some friends were putting together some puzzles in Kara's room. Because Kara was more familiar with the puzzles, she finished hers first and announced that she was going to go read a book until the other children finished their puzzles.

One of the children, a second grader, replied, "Kara, you can't read yet--you're too little." Kara had just celebrated her fifth birthday and was convinced that the birthday was a turning point to being a "big girl," so she first became incensed at being told she was too little. But then she replied to the other issue concerning her ability to read by saying, "I am so learning how to read--I know lots of books!"

Kara's little friend shares a bottom-up model of reading (a term coined by Rumelhart, 1976) with many reading theorists and educators, a model which assumes that information processing flows in one direction from lower to higher levels, or to put it in reading terms, from word recognition to comprehension. Kara's friend, in other words, believes that Kara cannot read because she cannot recognize printed words, a pre-requisite to comprehension.

However, reading can be defined in another way, as a meaningful interaction with a print setting. Interactive models of reading assume that lower level and higher level processing occurs simultaneously, in interaction with each other (Rumelhart, 1976). The reader's use of schemata (Anderson, 1976; Adams and Collins, 1977) and the knowledge of story structure (Stein and Glenn, 1977) are examples of higher levels of processing which interact with lower processing levels such as word recognition.

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Kara cannot recognize many printed words at the age of five, certainly not enough to pick up a text containing only print and be able to interact with it in any kind of a meaningful way. She can, however, interact in a meaningful way with a wide variety of print settings, with "lots of books" to use her words, by utilizing the non-visual (Smith, 1978) higher level information cued by the visual information over which she has control in the print setting. Print setting is a broadly conceived notion, defined as the context in which the language user encounters print, including the linguistic, situational, and cultural contexts (Harste and Carey, 1978). The familiarity of the book, the context in which a sign occurs, the illustrations of a book are all examples of print setting cues which Kara utilizes in order to meaningfully interact with a print setting.

There are two major assumptions underlying this case study of my daughter's written language development between the ages of 2 and 5:

1) The first assumption has already been referred to and concerns my definition of written language use. In this study, written language is utilized when a child meaningfully interacts with a print setting.

2) Second, the assumption must be made, because the written language learning of such a small child is being studied, that oral and written language learnings occur in a parallel and supportive fashion for a child who is immersed in a literate environment (Goodman and Goodman, 1976). That is, written language learning can and does occur during the same period that oral language learning is occuring. Oral language learning is not considered a pre-requisite for written language learning.

We have learned a great deal in recent years about oral language development--about <u>what</u> it is that children learn and about <u>how</u> they learn oral

language. Written language researchers are turning their attention to similar issues: what is it that children learn about written language and how do they learn it? In regard to these questions, written language researchers have become aware of the importance of collecting data about children's written language learnings prior to instruction, data reflecting the children's natural learnings in literate environments. The answers to these questions may have major implications for classroom instruction in written language.

The objective of this case study was to gather data concerning the written language learnings of one child growing up in a literate environment devoid of formal written language instruction. Thus far, three years of data has been collected on Kara from the ages of two to five in order to answer the two major questions previously referred to:

1) How has Kara been learning about written language? Though oral and written language are different expressions of language, they are both language and it may be hypothesized that the two expressions are learned in similar ways. How Kara has been learning written language is expected to parallel the observations oral language researchers have made concerning how children learn oral language.

2) What has Kara been learning about written language prior to formal instruction? What does she know about written language as a result of her years of interaction with print settings?

Though the two questions and attempts to answer them overlap considerably, in this presentation, I will attempt to focus on each question separately. The data analyzed to document answers to the questions comes from videotapes and audiotapes, written language samples, and diary entries collected from

shortly after Kara's second birthday to the present time, shortly after her fifth birthday. Illustrative examples from the data will be utilized to support statements made about what and how Kara has been learning about written language.

How Written Language is Learned

Let me first make some observations about how Kara is learning written language. In general, many of my observations parallel the observations researchers have made about how children learn in general and in particular, how children learn oral language.

First, Kara has not been taught written language any more than she has been taught oral language. For five years, she has been surrounded with an oral and written language environment and has utilized the data in her environment and feedback from the people around her to learn about language in both forms.

Kara has self-initiated much of her learning. To a large extent, she is the one who determines the content of her learning, the timing of her learning efforts, and the structure of her learning activites. In an environment rich with meaningful oral and written language, Kara is her own best teacher. Far better than anyone else, she knows what she is interested in, how she enjoys learning, and when she is ready for new information.

Determining Content

Kara has determined the content of her written language learning for as long as I can remember. She does it in a variety of ways--by establishing a personally important purpose for an activity, by ignoring requests or information from others who would like to teach her something or involve her

in something, and by asking a myriad of questions which demand feedback.

One story, which occurred even before I began collecting formal data on Kara's activities, illustrates not only how she establishes her own personal purpose for an activity but also how oral and written language develop in a parallel and supportive fashion. Kara's dad and I began to read to her before her first birthday and she would normally sit in one lap or another and listen to the stories, rhymes, or whatever. At about the age of 20 months, just prior to a tremendous oral vocabulary growth spurt, Kara established a new purpose for reading books. Instead of quietly sitting on my lap and enjoying the story, she would point to objects in the illustrations and ask me to name them. For several months, she ordinarily refused to allow normal story reading. If I tried to read a story, she would reach back and cover my mouth with her hand so that I was forced to discontinue reading. As soon as I resumed labeling the objects that she pointed out, she became perfectly content again.

Another story illustrates both how she refuses information that has been offered her when it doesn't suit her purpose and how she asks questions which demand feedback. Just before her third birthday, Kara had just finished dictating a letter to her father when she decided she also wanted to write a story to him. Following is part of the conversation which ensued as she wrote the story:

Kara: I want to write down a story what he (her father) has to tell me. "L." That's in your name (referring to my first name).

Lynn: That's right.

Kara: "O." "L," "O," how do you make a "P."

Lynn: What word are you making?

Kara: I'm not going to make a word. I'm making a story.

Lynn: You know what? If you write "V," "E," it's going to say "Love" because "L-O-V-E" spells "love."

Kara: Well, I'm not going to.

Lynn: Oh, you just want to write a story?

Kara: Uh-huh.

Lynn: A "p" looks like this--a straight line with a hump on it. (I make one on another paper for Kara to see.)

Kara: OK, a straight old "p." (She writes it.) "Q"--how do you make a "Q"?

Lynn: You make a "O" first; then you make a little line right down there. (I show her on another piece of paper.)

Kara: That looks kind of silly. "P," another "P" now.

This process went on for some time until Kara had completed the following "story" which she told me was about how much she loved her stuffed animals--her doggy, hippopotamus, rabbit, and Winnie the Pooh.

Determining timing

Besides determing the content of her written language learning, Kara also determines the timing of her learning efforts. In the last three years, I have observed her devote the major part of several days to the outdoors and her neighborhood friends and then devote the next few days to reading, and anything to do with paper--cutting, pasting, writing, drawing, and coloring. Or she might decide she prefers spending her time watching TV to reading books or writing for a period of time. Not long ago, she asked me if all kids had lots of books like she did. I told her no and she replied, "They're lucky then.

I'll bet they get to watch TV all the time." But I have also observed her get up and turn off the TV and head for her book shelves or her magic markers. I have found that it does no good to interfere with her self-imposed timing. Just as she remains perfectly healthy after a period of eating only a few bites of food a day, so she retains a healthy attitude toward reading and writing after no more apparent self-initiated interaction with written language than an occasional bedtime story for a period of time.

Determining structure

Kara also determines the structure of her learning activities. For example, I'm never sure what's going to happen when we sit down together with a book. Sometimes she insists that I read a story completely by myself and other times she insists on reading it completely by herself. Sometimes she requests unison reading or alternate reading. When we read What Good Luck! What Bad Luck! (Charlip, 1969), she usually assigns me all the good luck pages while she reads the bad luck pages or vice versa.

Occasionally she will inform me that I am to play the child while she role-plays mommy or teacher. In one instance when we were reading The Alphabet Book (Peppe, 1973), she informed me, "You gotta be three years old," her age at the time. One page reads "Count the dolls" and has an illustration of a cupboard with nine dolls sitting on the shelves. When I read the book to her, Kara always follows the directions and counts the dolls. Because I was requested to play the role ofthe child, she expected me to count also. What follows is the reversed mommy-child conversation resulting from an interaction with that one page of the book:

Kara: (Playing mommy and reading the page to me.)
...Count the dolls.

Lynn: (Playing child.) Count the dolls?

Kara: Yeah.

Lynn: (Pointing as I count.) One, two....

Kara: No, you forgot this one. (I did skip one on purpose.)

Lynn: Oh. One, two, three, four...

Kara: No! No, I'll tell you. One, two, three, four,

Lynn: Isn't that what I did? (It is--I didn't make any mistakes.)

Kara: Yeah. I'll count.

Lynn: Five.

Kara: That five; this is six. This is five. Say 'six.'

Lynn: Six.

Kara: Now, seven.

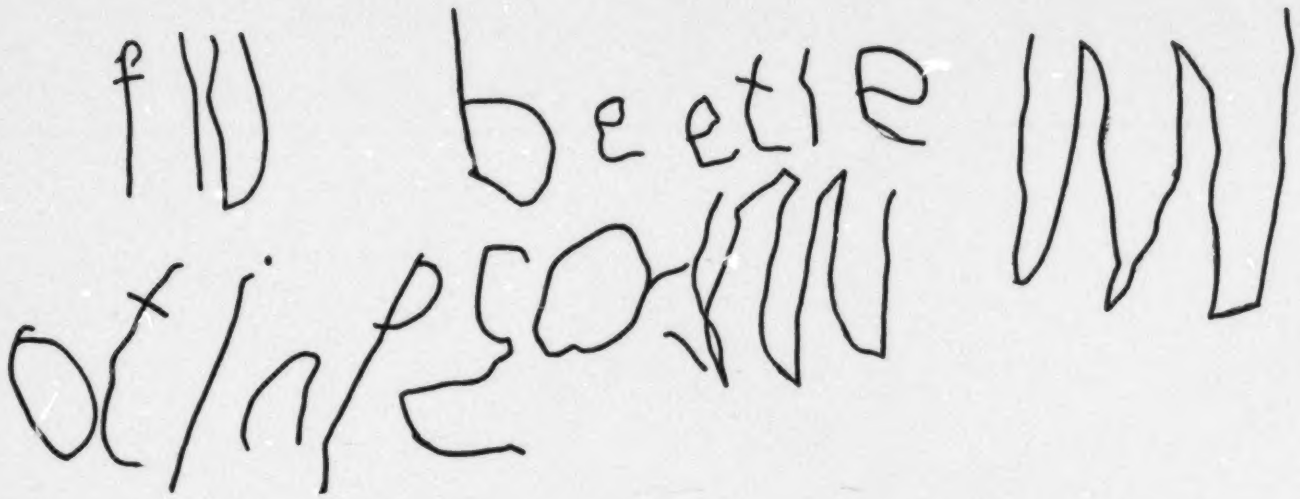
Lynn: Seven.

Kara: Now, two. (She did not know the number sequence well at this point.)

Lynn: Two.

Another example illustrates how Kara uses the written language data in her environment to structure written language production as well. At the age of four and a half, I noticed her seated at the table one day, copying words (see below) out of a book that was a favorite at the time, a book about various classifications of animals (About Animals, Scarry, 1976). She had the book open to a section on "large and small animals." When I asked her what she was doing, she told me she was making a list of animals that might be in our garden. In deciding upon a new classification system and deciding what she was going to write down, she had structured her own learning activity. (The top line reads "fly" and "beetle"; the second line reads "mosquito" written

backwards, with two attempts at the "m.")



Implications for instruction and research

Kara's self-initiation and self-structuring of her learning activities have implications for teaching and for data collection in research. She is not different from other children in giving her attention to those things in her environment that are, at least for the moment, personally meaningful and interesting. We may be able to keep children in their seats in schools, we may even succeed in keeping their eyes on the teacher or on the board. But, even so, each child's attention may not be on what the teacher is attempting to teach.

Another story about Kara illustrates this point well: When Kara was about two and a half, she was sitting in the bathtub and I came in to turn off the running water. She pointed at the "H" on the one water tap and said, "That's the hot water." Then she pointed to the "C" on the other tap and

said, "That means cold water." Like a good teacher trying to take advantage of the situation, I remarked, "Yes, "H" stands for "Hot" and "C" stands for "Cold." Kara gave me a withering look and said, "Mom, I can't remember the letters" (her emphasis). Kara was not ready for letter names at that point; she couldn't even consistently remember the letters of her name. But she had learned that there was a match between the distinctive features of the letters on the tap and the meanings they cued through her observation of water temperature and its relationship to the letters. She was clearly telling me that information was important to her, not the information I was trying to give her.

If we listen to children's responses and reactions as we teach or as we participate with them in print settings, we can learn a great deal about the kind of information they are interested in and ready for. In a rich environment of print, children will learn about written language; to a large degree, they will determine for themselves the content, timing, and the structure of their learnings. I am not advocating that children be left alone in a rich written language environment but I am suggesting that we need to listen to them, to follow their lead, to provide the feedback they request. They are experts at learning in that manner; they have done it for years. Frank Smith notes that "always the child will be the best guide to learning in the most efficient manner" (1978, p. 181) and that the teacher's job is to "respond to what the child is trying to do" (1973, p. 195).

There are implications for data collection in what I have reported also. I had to discover what Brown and his colleagues at Harvard discovered in their longitudinal studies of Adam, Eve, and Sarah: that spontaneous language use in natural situations provides richer and more significant data than language

collected in restricted situations contrived by researchers (Brown, 1973). In this study, scheduled videotaping sessions seldom yielded the spontaneous rich data that was collected via a tape recorder unobtrusively recording a self-initiated activity. In general, self-initiated activities resulted in natural, full, and serious responses to the print setting. In structured situations, on the other hand, Kara often rebuffed attempts to collect data or restructured the activity so that the resulting data was not at all what had been sought. Ordinarily, she did not become as actively involved in scheduled activities, resulting in less full and sometimes silly responses. After such data collection sessions, I often felt as Brown, Bellugi, and Fraser must have felt when they asked one of their subjects, "Adam, which is right, 'two shoes' or two shoe', and he responded, 'Pop goes the weasel!'" (Bellugi, 1970, p. 33).

What Is Being Learned About Written Language

Let us turn now to what Kara has been learning about written language. Some of what she has been learning has been apparent in the incidents I have related about how she has been learning written language. Now, however, I would like to focus on some specifics, the attitudes and insights she has developed about written language as well as the rules she has constructed concerning story structure, the structure of written language and how it differs from oral language, letters, sounds, and their relationships, and the form of written language.

Attitudes

Written language in its various forms and contexts is an important and pleasurable part of Kara's life. For as long as I can remember, Kara has

slept with not only the usual stuffed animals but also with a pile of books which can usually be found under her pillow. She is obviously not as sensitive to hard objects in her bed as the princess in "The Princess and the Pea."

She looks forward to 2 p.m. every day because that is when the mail arrives--she loves receiving letters and magazines. And she appreciates the fact that she must write letters (or dictate them) in order to receive them.

Probably the funniest example of her tremendous interest in reading occurred during the Christmas season prior to Kara's third birthday. Kara and her dad and I were decorating the Christmas tree, something she had been looking forward to for days. We suddenly realized that Kara was no longer helping and I turned around from what I was doing to look for her. She had spotted a new magazine that had arrived that day and had her head buried in it. I called to her to come help--that she could read the magazine anytime. She said OK but continued to leaf through the magazine. About five minutes later, I said, "Kara, look at the tree," hoping to entice her back before we finished. She looked up and with the same sort of tone adults use when they are interrupted to look at something a child has done, said, "It's pretty, Mom," and struck her head back in the magazine.

Insights

Children's attitudes toward written language set the stage for life-long learning about written language. But those attitudes are formulated, I believe, largely as a result of some important insights that children must make about written language: first, written language communicates meaning and second, the meaning it communicates has personal relevancy. Written language is important to Kara because she expects it to be meaningful and to be personally relevant.

Sometimes well-meaning adults lose sight of the fact that children expect print settings to be meaningful. For example, Kara was watching "Mr. Rogers" on television just after her fourth birthday. The theme of the entire show was "trees" but Mr. Rogers introduced a theme-related word recognition activity in an unrelated print setting causing some problems for Kara and probably many other viewers. A box was delivered to Mr. Rogers that had the word "tree" printed on it. He opened the box only to discover another box nested inside the first one, also with "tree" printed on it, this time in a different place. He found another box inside the second one and turned it and paused long enough for the TV viewers to find the word "tree." By the fourth box, Kara was absorbed in trying to find the word before Mr. Rogers did and when she found it, she yelled, "There it is--it says "box" right there!" Then she realized her miscue and said, "Oh, I mean 'tree.'"

Another incident reveals that Kara believes that she shares an expectancy that print is meaningful with others. At the age of four, Kara's pre-school teacher announced that a visitor was going to bring some snakes to school the following week. The next morning on our way to school, I noticed she had a book about snakes and lizards (Snakes and Lizards, Young Readers Press, 1971) in tow along with her lunch box. Since she usually took stories to school, not informational books, I asked about the reason for taking the book. She replied, "I told the teacher that I had a book about snakes that he could read to the other kids so they'll know about them."

Just as Kara has developed an expectancy for the meaningfulness of print, so has she developed an expectancy for written language to have personal relevancy. Indeed, she has a need for it to be personally relevant; she often applies what she has become familiar with in books to her own life.

For example, at two and a half, Kara dropped her mittens in the yard one day, picked them up and sang, "Naughty kittens have lost their mittens." Another example of her interest in making books personally relevant revolved around the book, The Fat Cat (Kent, 1971), a favorite for several months prior to her third birthday. The Fat Cat is a Danish folktale about a cat who eats a number of characters in succession and continually gets fatter until a woodcutter rescues them all from the cat's stomach. After almost every dinner during that period, Kara would stick her tummy out as far as she could and pat it, saying, "I'm a fat cat." And after feeding her own cat one day, she remarked that someone should have fed The Fat Cat some cat food and then he wouldn't have eaten all those people.

The production of written language is also meaningful and personally relevant to Kara. Recently, Kara and I had both stayed up quite late one evening and the next day, I suggested that we both take naps. At the age of five, she considers a nap to be an artifact of the past, and told me she didn't want to take one. The next thing I knew, she had seated herself at the table with a piece of paper and a pencil and was asking me how to spell "at friends." I asked her what she was doing and she told me that if she didn't go to sleep, she was going to get up, leave the note for me to tell me where she was, and go to her friends' house to play.

Knowledge of book language and story structure

Kara has learned that written language, in particular written language found in books, differs from oral language. Wardhaugh notes that "writing is not simply speech written down; it is more abstract than speech in content; it usually employs carefully edited and controlled language..." (1976, p. 61).

In the process of learning about written language, Kara has learned about story structure, and about how sentence structure and vocabulary often differ from that of oral language. Martin and Brogan (1975) note that story, poem, and written sentence patterns are stored in children's heads when they are read to, in what he calls their "linguistic storehouses."

Of course, Kara cannot verbalize the rules she operates with concerning story and sentence structure in written language. It is intuitive knowledge like the intuitive knowledge that she has about oral language learned in the same way, through the use of language. As Applebee has noted, "The very young child will not have much success in describing these [story] expectations to us, but they are reflected easily and directly in the stories which are told" (1977, p. 344).

Applebee (1977), Stein and Glenn (1977), and others have collected data on children's story expectations by simply requesting children to "Tell me a story." I have found that the same expectations about stories can be observed as children interact with print settings which cue story expectations. For example, Kara gave evidence of her knowledge of the convention of written story beginnings at the age of two when she was observed turning the pages of a book and saying aloud on each page either "Once upon a time" or "Once a time there...". She recently dictated a story to me to send to her cousin which featured "Once upon a time" in the beginning, "he lived happily ever after" at the end, a protagonist, a problem, and a solution. It was also told in the past tense, all of which are features which Applebee (1977, p. 343) and Stein and Glenn (1977, p. 4) note are conventions that denote children's "sense of story" and story structure.

At the age of four and a half, Kara received the book Pete's Dragon (Golden Press, 1977) in the mail from an aunt and uncle. She produced the following reading after seeing the movie a year and a half earlier and after hearing the story read to her three times. Her reading of the story in the right column can be compared with the text in the left column.

(Appendix A)

Kara did not use the print in the text in order to read this story; instead, the story content was cued by the illustrations, the three earlier readings, and her conceptual knowledge. The form of the story was cued by the three earlier readings, her prior knowledge of story structure and book language. After only three encounters with the book, she must have depended on the cognitive structures she has constructed about the world and about book language and story structure; it would not have been possible for her to produce a text as close to the original in any other way. It is largely because of her knowledge of story structures and book language that she can retain and produce a story like Pete's Dragon after only three readings. That knowledge is essential in her developing ability to gain control over print settings.

Knowledge of print

Thus far, I have given very little attention to Kara's control over the actual print or text in written language settings. Until only recently, Kara herself has given the print in print settings little overt attention. I do not mean, of course, that she has given it no attention at all. But it has been of secondary interest to her primary interest in the meaning of written language, to what it communicates to her.

First, let me relate the situations in which I have observed Kara to pay overt attention to print. There are six common and recurring situations:

1) Kara gives attention to print in a book after she has become familiar with the book and its content. Kara is very unlikely to ask questions or make comments about print in a new book; she appears only able to afford a shift in her focus to the parts of language once she has the whole in mind. When I read her the newest assortment of library books, the stories are not likely to be interrupted by questions about print. However, if I read her a familiar book, I can expect to hear questions like "Where does it say 'buzz buzz'?" or "Is this where it says 'Mr. Bear?" or "What does that line say?"

2) Kara pays attention to print when it conveys (or she thinks it conveys) highly personal or relevant information. Like many children, her own name held the most fascination for quite some time. Her first word recognition efforts and writing efforts revolved around her own name or what she believed to be her name. The names of close family members and friends have received much attention also.

3) Kara gives attention to print that is highlighted in some manner. Signs, both in and out of books, have commanded a considerable amount of attention. In The Digging-est Dog (Perkins, 1967), for example, Kara takes pleasure in reading the pet store signs, the name on the mailbox, and the dog's name on the doghouse. Likewise, she likes to read and has copied some of the words which end the stanzas of Willy O'Dwyer Jumped in the Fire (deRegniers, 1968). Each of the words appears in isolation on a page yet is supported both by the familiarity of the story as well as the particular illustration with which the word appears.

4) Kara pays attention to print that she either recognizes as being highly repetitive in a story or which is visually repetitive due to its format. For example, she asked which words said "teeny tiny" in The Teeny Tiny Woman (Zemach, 1965) a story which repeats the phrase "teeny tiny" almost 50 times. After I pointed out teeny tiny in one phrase, she wanted to find the words about a dozen times before she tired of the activity. An example of her attention to visual repetitiveness occurred when we read the following page from Too Much Noise (McGovern, 1967):

> So Peter let the cow go.
> He let the donkey go.
> He let the sheep go.
> He let the hen go.
> He let the dog go.
> He let the cat go.

Kara pointed out "He let the..." in the last five lines and asked why they were all the same.

5) Kara pays attention to print when it does not appear to be what she has learned to expect about print. For example, she has asked why stories contain "upside down i's," better known to us as exclamation marks. And, when she copies a word from a book that is followed by an exclamation mark, she corrects what she considers to be the author's error and writes it an an "i." Another example occurred not long ago when we were driving down one of the busiest streets in Denver and Kara suddenly remarked, "Mom, they have Chinese food in that place." I looked to see where she was pointing--at a sign containing Chinese symbols in front of a restaurant. We passed hundreds of signs before and after the Chinese sign but that was the only one she chose to comment upon--it was the only sign containing symbols different from what she expected to see.

6) Kara pays attention to print when she writes. In addition, she has recently begun to learn a great deal about sound/letter relationships as she writes. Whether copying a message or formulating her own, she learns about letter features and formation, letter labels, and the directionality of print in the process. When spelling her own messages, an activity she has only recently begun to engage in, she also utilizes and formulates knowledge concerning sound/letter relationships. I suspect that, as Kara begins to take more risks with invented spelling, her control over the print itself in print settings will begin to increase dramatically.

Print awareness. Kara's awareness of print began at least as early as 20 months when she pointed to the word "cat" on a page of a book (Here is a Cat!, Rokoff, no date) and asked, "What that?" At two years of age, she often requested her dad or me to write our names, her name, and the names of several friends. She appeared to be, at that point, only interested in watching the process of someone responding in writing to her requests. She made few comments about the writing we produced and could not distinguish one name from another when asked.

At age two and a half, we were reading a simple animal alphabet book (Animal Dictionary, Ahrenholz, 1973) when she asked what the two bits of print on the page said. One was a word, a label for the photograph of the bear on the page; the other bit of print was the page number, page 5. After she was told what each said, she proceeded to touch the word on each subsequent page and produce the appropriate animal's name and to touch each number and say "5," the number on the page she originally inquired about.

Since then, her discriminatory powers over print and her awareness of it have further increased. When she was a little over four years old, she recognized

"I love you" on some greeting cards in a store rack, and about the same time read "exit" and "McDonald's" in situations where the words were printed without the usual supportive context of a placement above a door or under a golden arch. When I asked recently if she would read some books for me on a tape recorder, she said, "Do I have to read really on the words?", a clue that though she is aware of the purpose of the print in books, she knows she does not have control over it yet and uses many other kinds of knowledge that she has control over in print settings to deal with the story or message.

Sound/letter relationships. Kara's awareness and knowledge of sound/letter relationships began with a long period of playing with sounds. At two and a half, she had an awakening awareness of rhyming words, usually evidenced as we read a book containing rhymes. By three and a half, she often initiated what she called "rhyming games," overgeneralizing to produce a number of words that either rhymed or began with the same sound. She also gave evidence that she could syllabicate words: if I didn't hear her when she told me something the first time, she would repeat her message by slowing it down, ostensibly so that I could understand her more easily: "Mom--I--drew--a--but--ter--fly."

Before she began showing much interest in writing, Kara did some hypothesizing aloud about sound/letter relationships. Several months before her fourth birthday, she announced, "Mom, 'l' starts 'lion' and 'lock' and 'elephant.'" In the last year, she has said things like, "'O' starts okra, right?" "'You' has a 'u' in it. What are the other letters?" "'Pizza' and 'zebra' have 'z's in them."

Kara has not been much of a risk-taker with spelling. Until only recently, she had not responded well to spelling words on her own; she insisted that I spell for her. Recently, however, she has become more intrigued with the fact that she can, with some help, figure out the sounds of a word and put them down

as letters so others can read them. Kara sometimes leaves messages on our refrigerator with magnetic letters for an elf who visits our house and leaves messages for her. After we attended a St. Patrick's Day parade this year, she wanted to tell the elf about it and selected words to spell to convey to him what we had seen: "parade" as "prad" and "floats" as "flots." She had intended to write much more but was exhausted with the effort expended just to construct those two words.

Letter recognition. It is clear from observations I have made about Kara that the ability to label letters is not a necessary prerequisite to learning to discriminate between words or to recognize or produce words. Some knowledge of the distinctive features of letters seems to be necessary but the labels for letters and for words have been parallel learnings for Kara. For example, Kara continues to have some difficulty consistently attaching the labels for "A" and "R" to the correct letters, a problem stemming from the context in which they were first encountered, her name. She can also write my name independently and sometimes asks, after she finishes it, what the two letters are on the end (two n's). Sometimes she'll bring me a capital "G" and small "g" from her collection of magnetic letters, tell me they are the big and little ones, and then say, "What is their name?" If I am spelling a word to her as she is writing, she sometimes cannot remember how to write the letter. When I describe some of what I consider the distinctive features of the letters ("two straight lines and a bridge across" to describe a capital "H", for example) or remind her of a familiar context in which the letter occurs ("D" like in "Daddy"), she can usually produce the letter immediately.

Directionality. Kara has gradually learned about the directionality of written language. At a little over two years, it appeared to make no difference

to her whether she held books upside down as she looked at them. At two and a half, she was observed to read the last page of Brown Bear (Martin, 1970) by pointing at each illustration beginning at the bottom of the page and moving left to right on one row, right to left on the next, until she reached the top line of illustrations. She has understood now for sometime that writing begins at the top of the paper; she has recently developed an understanding that it is supposed to start on a particular side as well. Because she can not remember which side, she usually asks where to begin.

She has long recognized the correct directionality of capital letters but still does not consistently produce them with the correct directionality. Shortly before her third birthday we were in a Ponderosa Steak House and she pointed out an upside down R, a cattle brand on the wall, calling it an "upside down letter in my name." Another illustration occurred one night when a friend and I played an adult game that contained letter tiles and she arranged each letter tile in the correct direction.

For months at the age of three and a half, she liked to spell the words in our car as we rolled along. "Lock" on the door handle was almost always spelled "KCOL." At the present time, she seems to be moving from left to right more often when she spells written words or points to lines of print in books but it is still not consistent.

The inconsistency of both letter and word directionality can be seen in the following drawing and writing sample done four months before her fifth birthday. The drawing is a picture of a little girl swimming in the ocean. The words (spelled by me) are "head," "wave," and "ocean." The word "head" and the "E" and "D" of "head" do not conform to standard directionality but the remainder of the writing does.

Written Language Instruction: A Focus

Kara has another full school-year before she enrolls in first grade and engages in formal written language instruction. I would like for her to enter a classroom that allows her to capitalize on what she has learned about written language. And I would like for her to enter a classroom where how she learns is respected.

Kara, other first graders, all students need a meaningful language environment, a personally relevant language environment, and feedback when it is needed and requested. In order to learn to read and write, children must read and write, they must be read to, and they must be able to observe others in the process of writing.

Children's reading and writing efforts must be respected. Children are naturally more interested in the process of learning than in the product they produce; teachers must become more interested in and facilitative of

the process as well. Children are naturally more interested in the meaning of a message than in its form; teachers must become more interested in and facilitative of what is communicated as well.

Reading and writing errors or deviations are a natural part of the process of reading and writing and a natural part of the process of learning. We do not expect children to learn oral language with precision; we expect them to gradually approximate adult language. Researchers must continue in their efforts to understand the natural development of written language so that they can keep teachers informed. Teachers must come to understand what is already known about how children learn and specifically how they learn written language. And finally, researchers and teachers together must utilize those understandings in the development and teaching of written language curriculums.

APPENDIX A

Kara reading Pete's Dragon on 10/78.

Text	Kara
One day, a boy named Pete walked into a little town by the sea. Pete had no family but he did have a pet dragon named Elliott.	One day Pete and Elliott walked down the street near the lake.
Elliott was a wonderful, friendly dragon. He had green scales and purple wings and a big, long tail--and he could fly! He could breathe fire out through his mouth. When he didn't want anyone to see him, he could make himself invisible!	
Pete and Elliott soon found a cave to spend the night in. They had just settled in when they saw a young woman peering through the cave entrance. "Hi," she said to Pete. "My name's Nora. What's yours?" "I'm Pete, and this is my dragon, Elliott," Pete answered.	They just found a...a cave to spend the night in. When they settled in, a young lady peeked through the cave entrance. Nora said, "What's your name?" And Pete said, "My name's Pete. And this is my pet dragon." Pete said, "What's your name?" And Nora said, "My name is Nora."
"It's kind of a cold place to spend the night, isn't it?" Nora asked Pete. "Why don't you stay at the lighthouse with my dad and me? I'd ask Elliott to stay, too but I'm afraid he won't fit."	"Isn't this a cold night to spend the night in?" "Yea." "I would ask Elliott to stay...stay too but he might can't fit."
Pete was sorry to leave Elliott alone in the cave, but the kindly dragon didn't mind. He was happy that Pete would have a nice, warm place to stay, anyway. So Pete moved into the big lighthouse with Nora and her father, Lampie.	Pete was sorry Elliott...Pete would leave Elliott alone. But Elliott...Pete...I mean Elliott said...I mean Elliott was happy Pete would have a nice warm place to stay, to spend the night in.
The next day, Nora took Pete into town and bought him some new clothes. Then they went to the schoolhouse. Elliott went with them. He wanted to go to school, too.	One morning Nora and Pete went to buy Pete some new clothes.
When the teacher saw Elliott, she would not let him into the school. "I'm sorry," she told Pete, "but dragons are not allowed in school. Besides, Elliott won't fit!"	When the teacher saw Elliott, he would not let him in. Pete went with him too because he wanted to go to school too but the minute the teacher saw Elliott, he wouldn't... he wouldn't let him in.

Text	Kara
Elliott was sad, but he waited patiently outside on the playground. After a while, the children came outside for recess.	He was sad but he waited patiently out on the playground. But...but pretty soon the children came out for russy, um russic, (she means recess and she knows she doesn't have the proper word for it).
Elliott played with the children then, and they had lots of fun. They played ring-around-the-dragon and then dragon-in-the-middle. But soon the bell rang, and it was time for the children to go back in. Elliott was left alone again.	but...but in a little they played "Ring Around the Rosie" with Elliott and "Dragon in the Middle" with Elliott. But soon the bell rang and it was time for everybody to go in.
After school, Pete rode home on Elliott's back. They both noticed that the sky was growing dark and cloudy. "Let's hurry, Elliott," Pete said. It looks as though there's a storm coming.	But when Elliott went in, Pete go back home on Elliott's back. But Pete said, "It's getting dark. There's going to be a storm tonight." So they hurried home.
Later, Pete was eating dinner at the lighthouse with Nora and Lampie. Suddenly, there was a bright flash of lightening and a loud crash of thunder. "My goodness!" exclaimed Nora. "It must be a terrible storm. We'd better check the lamp." Nora and Lampie had to be sure the lamp in the lighthouse was lit all the time so ships could find their way to shore.	But when they got home, there was a big clap of thunder. Nora said, "My gracious. It might be a big storm. We got to check the lamp in case it runs out of fire."
Nora led the way up the winding stairs to the very top room, where the big lamp was. When she got there, she cried, "Oh, no! The lamp has gone out." It was true! The wick of the big lamp was wet, and Lampie and Nora couldn't light it again.	But when Nora got up to the top of the winding stairs, the lamp had gone out. "What shall we do?"
As they tried to get the lamp lit, they heard a sound out at sea. "It's a ship's foghorn!" Lampie shouted. "If we can't get this lamp started, the ship will be lost! It'll run onto the rocks!" "This is a job for Elliott," said Pete. He turned and raced down the stairs.	Then he saw a...then he heared a fog horn and it was a ship and he said, "If we can't get this lamp started, then the ship would be lost and it would run onto the rocks." Elliott said, "This is a job for Pete." Elliott raced down the stairs to get Pete. (She gets Pete and Elliott mixed up here.)

Text	Kara
Pete ran along the beach to the cave. Big waves were crashing against the shore, and rain was pouring down. Pete found Elliott asleep in the cave. "Wake up, Elliott! You've got to help us!" he cried. He shook the big dragon's leg and patted his face.	But when he got downstairs, Pete was asleep. He kicked the big dragon's leg and he patted the big dragon's face.
Elliott woke up and rubbed his eyes sleepily. When Pete told him about the problem, he jumped up. He left the cave and rushed to the lighthouse.	Elliott woke...waked...waked up but...and he told him about the problem. Elliott jumped up and ran.
Elliott squeezed into the lighthouse and up the winding stairs. It was a tight fit because Elliott was a big dragon. When he reached the tiny room at the top, he took a deep breath. He blew a great blast of firey breath upon the wick of the lamp.	and he blowed...blowed a big, big blast of fire on the glass.
The lamp was lit again! Now the light shone brightly over the stormy sea. The ship was able to find its way safely to land.	
Elliott was a hero! Everyone was grateful to Pete and his dragon. Only one thing still made Elliott unhappy: He couldn't go to school with Pete and the other children.	He...Elliott was a hero but something still made Elliott unhappy. He still couldn't go to school.
The townspeople got together, and they made a decision. Whenever the weather was warm and sunny, classes would be held outside so that Elliott could watch and listen to everything that happened.	The kids talked about on sunny days they could go outside so what everybody happened...what everything happened, Elliott could hear it.
And the teacher agreed that maybe dragons should be allowed at school--well, Pete's dragon, anyway!	But...dragons could be allowed at school--but Pete's dragon anyway.

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